

WHAT IS CLAIMED IS:

1. An apparatus for decompressing compressed data including a plurality of groups of compressed pictures, comprising:
 - 5 recording means including at least one random access memory for recording said compressed data,
 - reading means for reading said compressed data from said recording means,
 - decompressing means for decompressing said compressed data read from said recording means by said reading means,
 - 10 at least one frame memory for storing said decompressed data produced by said decompressing means,
 - picture designating means for designating said compressed picture to be decompressed, and
 - control means for controlling said reading means by specifying said group of compressed pictures to be read from said recording means by said reading means based on said picture designated by said picture designating means and controlling said decompressing means by transmitting data of said picture designated by said picture designating means to said decompressing means.
- 20 2. An apparatus for decompressing compressed data as set forth in claim 1, wherein each of said groups of compressed pictures contains at least one Intra-coded picture and Predictive-coded pictures, said reading means is operated to read said group of compressed pictures containing said picture designated by said picture designating means, said decompressing means is operated to decompress said Intra-coded picture
25 included in said group of compressed pictures read by said reading means and said Predictive-coded pictures between said pictures designated by said picture designating means and said Intra-coded picture included in said group of compressed pictures read by said reading means under the state that said Predictive-coded picture is selected based on said picture designated by said picture designating means, and said predictive-coded
30 picture designated by said picture designating means is decompressed by said decompressing means on the basis of said decompressed Predictive-coded picture immediately before said picture designated by said picture designating means.
3. An apparatus for decompressing compressed data as set forth in claim 1, wherein
35 each of said groups of compressed picture contains at least one Intra-coded picture, Predictive-coded pictures, and Bidirectionally-coded pictures, said reading means is operated to read said group of compressed pictures containing said picture designated by

5 said picture designating means, and said decompressing means is operated to decompress
the Intra-coded picture included in said group of compressed pictures read by said
reading means and said Predictive-coded pictures between said pictures designated by
said picture designating means and said Intra-coded picture included in said group of
10 compressed pictures read by said reading means under the state that one of said
Bidirectionally-coded picture is selected as said picture designated by said picture
designating means, and said Bidirectionally-coded picture designated by said picture
designating means is decompressed by said decompressing means on the basis of said
decompressed Predictive-coded picture immediately before said picture designated by
15 said picture designating means.

4. An apparatus for decompressing compressed data as set forth in any one of
preceding claims, which further comprises displaying means for displaying a picture with
said decompressed data stored in said frame memory.

15 5. An apparatus for decompressing compressed data as set forth in any one of
preceding claims, wherein said frame memory includes first and second memory
sections, and each decompressed data produced by the decompressing means with or
without said data stored in said first and second memory sections is respectively stored in
20 said second and first memory sections.

6. An apparatus for decompressing compressed data as set forth in claim 5, wherein
said frame memory further includes a third memory section for storing said data for
displaying pictures while the compressed data are decompressed by said decompressing
25 means.

7. An apparatus for decompressing compressed data as set forth in claim 6, wherein
said designating means is operated to designate a picture, said control means is operated
to transmit said data of said designated picture to said reading means and decompressing
30 means, said decompressing means is operated to have one of said three memory sections
to store said data decompressed immediately before said designated picture, and to have
said two other memory sections to store said decompressed data, said displaying means
is operated to display said pictures decompressed immediately before the designated
picture.

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8. An apparatus for decompressing compressed data as set forth in any one of preceding claims, wherein each compressed data is decompressed asynchronously with the timing of displaying said picture.

5 9. A method for decompressing compressed data including a plurality of groups of compressed pictures, said compressed data being stored in a recorder having at least one random access memory for recording said compressed data, comprising the steps of:
reading said compressed data from said recorder,
decompressing said compressed data transmitted from said recorder,
10 storing said decompressed data,
designating said compressed picture to be decompressed, and
controlling said step of reading by specifying said group of compressed pictures to be read based on said picture designated in said step of designating and controlling
said step of decompressing by transmitting said data of said picture designated in said
15 step of designating for the decompression.

10. A method for decompressing compressed data as set forth in claim 9, wherein each of said groups of compressed pictures contains at least one Intra-coded picture and Predictive-coded pictures, said group of compressed pictures containing said picture
20 designated in said step of designating is read, said Intra-coded picture included in said read group of compressed pictures, and said Predictive-coded picture between said pictures designated in said step of designating, and said Intra-coded picture included in said group of compressed pictures is decompressed under the state that said Predictive-coded picture is selected based on said picture designated in said step of
25 designating, and said picture designated in said step of designating is decompressed on the basis of said decompressed Predictive-coded picture immediately before said picture designated in said step of designating.

11. A method for decompressing compressed data as set forth in claim 9, wherein
30 each of said group of compressed pictures contains at least one Intra-coded picture and Predictive-coded pictures, said group of compressed pictures containing said picture designated in said step of designating is read, said Intra-coded picture included in said read group of compressed pictures, and the Predictive-coded picture between said
pictures designated in said step of designating, and said Intra-coded picture included in
35 said group of compressed pictures is decompressed under the state that said Bidirectionally-coded picture is selected as said picture designated in said step of designating, and said picture designated in said step of designating is decompressed on

the basis of said decompressed Predictive-coded picture immediately before said picture designated in said step of designating.

12. A method for decompressing compressed data as set forth in any of claims 9 to 11,
5 which further comprises the steps of displaying pictures with said decompressed data stored in said frame memory.

13. A method for decompressing compressed data as set forth in any of claims 9 to 12,
10 wherein said frame memory includes first and second memory sections, and said step of storing comprising the step of storing said decompressed data in said first memory section, storing said decompressed data produced with the data stored in said first memory section in said second memory section, and storing said decompressed data produced with the data stored in said second memory section in said first memory section.

15 14. A method for decompressing compressed data as set forth in claim 13, wherein said frame memory further includes a third memory section for storing decompressed pictures, and said decompressed pictures stored in said third frame memory section are displayed while the compressed data are decompressed in said step of decompressing.

20 15. A method for decompressing compressed data as set forth in claim 14, wherein one of said three memory sections is selected to operate to store said data decompressed immediately before said designated picture in the event of a picture being designated in said step of designating, said decompressed picture stored in one of said three memory
25 sections is displayed while the compressed data is decompressed in said step of decompressing, and two other memory sections are selected to store said decompressed data, and said step of decompressing is performed with two other memories except for said memory section selected to store said data decompressed immediately before said designated picture.

30 16. A method for decompressing compressed data as set forth in any of claims 9 to 15, wherein each compressed data is decompressed asynchronously with the timing of displaying said picture.

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